

Title (en)

NONMAGNETIC AUSTENITIC STAINLESS STEEL AND MANUFACTURING METHOD THEREFOR

Title (de)

NICHTMAGNETISCHER AUSTENITISCHER EDELSTAHL UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

ACIER INOXYDABLE AUSTÉNITIQUE NON MAGNÉTIQUE ET SON PROCÉDÉ DE FABRICATION

Publication

**EP 3865601 A1 20210818 (EN)**

Application

**EP 19884660 A 20191031**

Priority

- KR 20180138491 A 20181112
- KR 2019014538 W 20191031

Abstract (en)

Disclosed are a non-magnetic austenitic stainless steel having excellent hot workability and low permeability during manufacturing, and a manufacturing method thereof. The non-magnetic austenitic stainless steel according to an embodiment of present disclosure includes, in percent (%) by weight of the entire composition, C: 0.01 to 0.05%, Si: 1.5% or less, Mn: 0.5 to 3.5%, Cr: 17.0 to 22.0%, Ni: 9.0 to 14.0%, Mo: 1.0% or less, Cu: 0.2 to 2.5%, N: 0.05 to 0.25%, the remainder of iron (Fe) and other inevitable impurities, and satisfies following Formulas (1) and (2).

$$\begin{array}{ll} (1) & 0 \leq 3*(Cr+Mo) + 5*Si - 65*(C+N) - 2*(Ni+Mn) - 27 \leq 5 \\ (2) & 660 - 500*(C+N) - 10*Cr - 30*(Ni+Si+Mo+Cu) \leq 0 \end{array}$$

IPC 8 full level

**C22C 38/58** (2006.01); **C21D 8/02** (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/42** (2006.01); **C22C 38/44** (2006.01)

CPC (source: EP KR US)

**C21D 1/28** (2013.01 - EP); **C21D 6/00** (2013.01 - EP); **C21D 6/004** (2013.01 - EP US); **C21D 6/005** (2013.01 - EP); **C21D 8/0205** (2013.01 - EP); **C21D 8/0226** (2013.01 - EP KR US); **C21D 8/0236** (2013.01 - EP KR US); **C21D 8/0263** (2013.01 - EP KR); **C21D 8/1222** (2013.01 - EP); **C21D 8/1233** (2013.01 - EP); **C21D 8/1261** (2013.01 - EP); **C21D 9/46** (2013.01 - EP); **C22C 38/00** (2013.01 - EP); **C22C 38/001** (2013.01 - EP KR US); **C22C 38/02** (2013.01 - EP KR US); **C22C 38/04** (2013.01 - EP KR); **C22C 38/42** (2013.01 - EP KR US); **C22C 38/44** (2013.01 - EP KR US); **C22C 38/58** (2013.01 - EP KR US); **C21D 2211/001** (2013.01 - EP KR US); **Y02P 10/20** (2015.11 - EP)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**EP 3865601 A1 20210818**; **EP 3865601 A4 20220302**; CN 113015817 A 20210622; CN 113015817 B 20230505; JP 2022507339 A 20220118; JP 7221474 B2 20230214; JP 7221474 B6 20230228; KR 102173302 B1 20201103; KR 20200054779 A 20200520; US 2022010392 A1 20220113; WO 2020101227 A1 20200522

DOCDB simple family (application)

**EP 19884660 A 20191031**; CN 201980074435 A 20191031; JP 2021525856 A 20191031; KR 20180138491 A 20181112; KR 2019014538 W 20191031; US 201917293360 A 20191031